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TOWARDS A FLEXIBLE THEATER AIR WARFARE DOCTRINE

CORE COURSE ESSAY

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TOWARDS A FLEXIBLE THEATER AIR WARFARE DOCTRINE

Introduction

“Billy Mitchell was right.” These words hung in the foyer of the Air Force Air Command and Staff College during Desert Storm, reflecting the belief that airpower had finally come of age in the skies over Iraq. As the nation learned of one successful air strike after another, it became obvious that something was significantly different about America’s latest war. Expectations rose that Coalition air forces could win a decisive victory without the need for a costly ground assault. The fact that the air campaign did not obviate the need for a ground offensive has not stopped post-war speculation that a few more days or weeks of strategic air attacks might have led to Saddam’s capitulation.

Speculation is a challenging intellectual exercise, but it is more important to understand why strategic bombing advocates believe the way they do. This essay traces the theoretical underpinnings of the Desert Storm strategic air campaign, examines its key assumptions, and reviews barriers to developing a more flexible doctrine for future limited conflicts. Air Force strategic air warfare doctrine is rooted in the theories of the earliest airpower advocates, including Giulio Douhet, Brigadier General William “Billy” Mitchell, and the men of the Air Corps Tactical School. Although theory has continued to evolve in response to technological advances, their core belief that airpower could win a decisive victory without the need to first destroy an enemy’s army was also a key assumption of the Desert Storm strategic air campaign plan. In fact, the initial Air Force campaign proposal did not target Saddam’s Republican Guard divisions, a critical center of gravity. As we develop joint air warfare doctrine for the 21st Century, we must ensure it remains relevant for executing options against a wide range of potential conditions and centers of gravity. This will require Air Force airmen to challenge their deeply rooted beliefs on how airpower can best support the joint campaign, as well as strategic air warfare’s linkage to the Air Force as an independent Service.¹

¹ Doctrine as used in this essay includes official doctrine (such as Air Force Manual 1-1) and informal doctrine (beliefs commonly held by airmen that constitute a guide for action)

Roots of strategic air warfare theory

Giulio Douhet

In the aftermath of World War I, the widespread recognition that armed conflict had fundamentally changed stimulated a search for the means to restore mobility on the battlefield and avoid the terrible costs of trench warfare. War was no longer simply a matter of defeating the enemy's army; future strategies must also address how to break the will and destroy the war-making capacity of an enemy nation. Giulio Douhet, commander of Italy's first air units during WW-I, was one of the first to publish his observations concerning the potential of the airplane in his seminal book titled Command of the Air ²

In essence, Douhet predicted future victories would be the result of the intelligent use of airpower to exhaust the enemy's materiel and moral resources, and not the product of a Jominian battle between armies. Douhet believed an independent air force could win a decisive victory by attacking a nation's most vulnerable centers, including its cities, populace, transportation nets, and commerce. Airpower offered the advantage of attacking these centers without the need to defeat the enemy's army first. Because bombing accuracy was poor, Douhet advocated using high explosive, chemical, and biological area weapons to inflict the greatest possible shock and bring about moral collapse as quickly as possible. Wars would be shorter, and thus more humane, since strategic bombardment could avoid a costly stalemate on the battlefield. Command of the air, by which Douhet meant defeating an enemy air force on the ground before they could assume the offensive, was a necessary and sufficient condition for victory. Once achieved, an enemy would have the option of capitulating or suffering massive damage from unrestricted bombing.

Douhet developed his theories specifically for Italy and not for nations with different strategic considerations, such as the availability of resources for national defense. However, the concept that airpower can win a decisive victory without the need to defeat the enemy's army appeals to nations with predilections against protracted conflicts and massive casualties, including the United States.

² Douhet, Giulio, Command of the Air, trans. Dino Ferrari (New York: Coward-McMann, Inc., 1942; repr. Washington, D.C.: Office of Air Force History, 1983).

America's Douhet: Brigadier General William "Billy" Mitchell

There is ample evidence that Douhet influenced the thinking of American airmen, including Billy Mitchell. As Commander of the First Army Air Service during World War I, Mitchell was convinced airpower had the potential to dominate the battlefield if used in a concentrated fashion. Shortly after the war, Mitchell wrote an air force's principle mission was to destroy the enemy's air force and attack military forces on the ground, reflecting his experiences on the Western Front.³ As airmen fought to establish an independent air service during the interwar period, many, including Mitchell, came to favor Douhet's theory that airpower could independently achieve a decisive victory by attacking a nation's vital centers. By 1925, Mitchell was writing "no longer will the tedious and expensive processes of wearing down the enemy's land forces by continuous attacks be resorted to. The air forces will strike immediately at the enemy's manufacturing and food centers, railways, bridges, canals, and harbors."⁴ By 1930, Mitchell unequivocally declared "air power, which can go straight to the vital centers and either neutralize or destroy them, has put a completely new complexion on the old system of making war. It is now realized that the hostile main army in the field is a false objective, and the real objectives are the vital centers."⁵ While some historians prefer to focus on his earlier writings on battlefield attack, Mitchell clearly moved towards advocating airpower's potential to directly defeat a nation's will and warfighting capacity without destroying their army in the field. He also agreed with Douhet that an independent air force was a necessary step towards building the means and the doctrine needed for the next air war.

Air Corps Tactical School (ACTS)

Established in 1920 at Langley Field, Virginia, ACTS built on the theories of Douhet and Mitchell to produce what became the foundation of the Air Corps' strategic bombing doctrine during WW-II. According to Major General Haywood S. Hansell Jr., ACTS developed five fundamental aphorisms

³ Robert Frank Futrell, Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force 1907-1960, vol. I (Maxwell AFB, Alabama: Air University Press, 1989) 33

⁴ William Mitchell, Winged Defense (New York: G.P. Putnam's Sons, 1925) vi-vii

⁵ William Mitchell, Skyways: A Book on Modern Aeronautics (Philadelphia: Lippincott, 1930) 255-256

- 1 "Modern great powers rely on major industrial and economic systems the disruption and paralysis of these systems undermines both the enemy's capability and will to fight."
2. "Such major systems contain critical points whose destruction will break down these systems, and bombs can be delivered with adequate accuracy to do this."
- 3 "Massed air forces can penetrate air defenses without unacceptable losses to destroy selected targets "
- 4 "Proper selection of vital targets in the industrial/economic/social structure of a modern industrialized nation, and their subsequent destruction by air attack, can lead to . victory through air power."
- 5 "If enemy resistance still persists after successful paralysis of selected target systems, it may be necessary as a last resort to apply force upon the sources of enemy national will by attacking cities."⁶

These aphorisms clearly show the impact of technology on doctrine as well as the aversion to protracted battlefield stalemates embodied in indirect approach theories Bombing accuracy had improved to the point that airmen were considering how to target the critical nodes of an industrial web. Daylight precision bombing replaced area bombing of population centers, except as a last resort Despite these changes, Douhet's basic tenets remained intact Air Corps planners believed airpower, given sufficient resources and opportunity, could attack the vital centers of Germany and Japan to win a decisive victory without defeating their armies on the ground. Whether or not the World War II strategic bombing campaigns were decisive remains a controversial subject. What is certain, however, is that Air Corps airmen believed strategic bombing had proven its value, and was the major reason they gained their independence two years after the war.

Strategic air warfare theory today

Planning the Desert Storm strategic air campaign

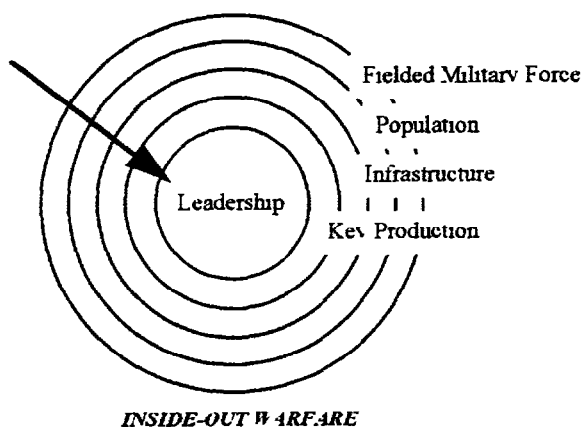
The years between World War II and Desert Storm were marked by a preoccupation with nuclear deterrence and a potential Soviet invasion of Western Europe. Except for a brief period during the Vietnam conflict, *conventional* strategic air warfare was a relatively neglected area of study When Iraq invaded Kuwait in August 1990, Air Force planners did not have a ready guide for planning a conventional strategic air campaign Doctrine contained little more than a definition of strategic attack and a brief review of airpower's potential impact on a nation's will and capacity to wage war ⁷ Forty-six years after the victory

⁶ Haywood S. Hansell, Jr. The Strategic Air War Against Germany and Japan: A Memoir (Washington, D.C.: Office of Air Force History, 1986), 9-10. General Hansell was an ACTS instructor and an architect of the strategic bombing campaigns against Japan and Germany during World War II.

⁷ Air Force basic doctrine defines strategic air warfare as "air combat and supporting operations designed to effect, through the systematic application of forces to a selected series of targets, the progressive destruction and disintegration of the enemy's war-making capacity to a point where the enemy no longer retains the ability or the will

over Germany and Japan, American airmen returned to the tenets of the Air Corps to defeat Saddam Hussein

In August 1990, Air Force Colonel John A. Warden III assembled a team in the basement of the Pentagon to develop what became the nucleus of the Desert Storm air campaign. Their efforts were founded on classic World War II bombing doctrine, including airpower's potential to defeat Iraq by attacking key centers of gravity. Of course, the Air Force of 1990 was radically different from the Air Corps of the 1940s. Precision weapons, stealth technology, and a smaller target base gave airmen the potential to wage what Warden called "parallel warfare," the ability to strike all of an enemy's centers of gravity simultaneously. Warden and his planning cell believed parallel warfare could paralyze Iraq's leadership, preventing Saddam from effectively controlling and supporting his forces in Kuwait. Airpower, correctly employed by a Joint Force Air Component Commander (JFACC), had the potential to destroy Iraq's will and capability to wage war without the need to defeat the Iraqi Army or invade Kuwait. Colonel Warden's team organized Iraq's centers of gravity into five concentric rings and described the plan as "inside-out warfare".⁸



In his 1988 book titled The Air Campaign, Colonel Warden defined centers of gravity according to

Clausewitz's classic dictum "the hub of all power and movement on which everything depends"⁹ Warden

to wage war. Vital targets may include key manufacturing systems, sources of raw material, critical material stockpiles, power systems, transportation systems, communication of uncommitted elements of enemy armed forces, key agricultural areas, and other such target systems." Air Force Manual 1-1, vol. II (Washington, D.C.: Headquarters, United States Air Force, March 1992), 3(2). Word-for-word, this is the same definition used in the early 1950s.

⁸ Lt Colonel David A. Deptula, from a 1991 briefing titled "The Air Campaign: The Planning Process," slide 3

⁹ John A. Warden III The Air Campaign (Fort Lesley J. McNair: Washington, D.C.: NDU Press, 1988) 11. Carl von Clausewitz, On War, translated and edited by Michael Howard and Peter Paret (Princeton, N.J.: Princeton University Press, 1976) 595

added they are also “the point where the enemy is *most vulnerable* and the point where attacks will have *the best chance of being decisive* [emphasis added]”¹⁰ The objectives of inside-out warfare were to “isolate Hussein, eliminate Iraqi offensive and defensive capability, incapacitate national leadership, reduce threat to friendly nations” and “minimize damage to enhance rebuilding”¹¹ Warden’s center of gravity definition, combined with the plan’s objectives, reveal the team had established a hierarchy between the rings, with “leadership” the most important. They believed direct and indirect air attacks to isolate Iraq’s leadership were possible, and had the best chance of being decisive.¹²

According to the team’s plan, typical “leadership” targets included command and control facilities, and civil and military telecommunications. “Key production” targets included facilities for generating electric power, oil distribution and storage, nuclear/biological/chemical weapons, and facilities for military research, production, and storage. No direct attacks on the Iraqi “population” were planned in order to minimize casualties and collateral damage. Instead, psychological operations and attacks on other core targets would influence national will. Attacks on “fielded military forces” would concentrate on destroying Iraq’s offensive and defensive air capabilities. Colonel Warden briefed his initial plan to General Colin Powell on 11 August 1990. While the Chairman expressed approval for strategic air attacks, he noted a crucial missing element *the plan failed to target the Iraqi Army*, including Saddam’s elite Republican Guard divisions.¹³

The assumptions underlying Warden’s plan closely resemble the five aphorisms developed at ACTS, with the exception that direct attacks on the Iraqi people were unacceptable, especially in a limited war waged with limited means. The plan also reveals the persistence of the theory that ground forces should assume a lower priority in the air targeting hierarchy. Results of the Desert Storm air campaign indicate a broader, more flexible doctrine may provide a better guide for future air campaign planners.

¹⁰ Warden, 11

¹¹ Deptula, slide 4

¹² This assumption closely resembles Douhet’s theory that a nation’s inner centers of gravity were the most vulnerable to air attack. While few would dispute leadership as a center of gravity its relative vulnerability is questionable.

¹³ Richard T. Reynolds, *Heart of the Storm: The Genesis of the Air Campaign against Iraq* (Maxwell AFB, Alabama: Air University Press, January 1995) 72. General Powell directed Warden to broaden the air campaign plan to include attacks on the Republican Guard.

Towards a more flexible strategic air warfare doctrine

Fielded military forces

Throughout the short history of airpower, airmen have debated the relative value of attacking ground forces versus other, potentially more vulnerable and productive centers of gravity. When General Powell asked about attacking the Iraqi Army during the 11 August briefing, Colonel Warden replied:

“One of the things we really need to be careful about is that if there’s some action on the ground, you can’t re-role the strategic air campaign. You’ve got to press with the strategic air campaign. We made that mistake in World War II, and we don’t want to do that again . . . the strategic air campaign will isolate Hussein, virtually assuring that most forces could walk home.”¹⁴

In other words, diverting resources from the strategic air campaign to widen attacks against the Iraqi Army could delay a final victory. The results of the air campaign do not support this assumption.

According to the Gulf War Air Power Survey (GWAPS), Coalition air attacks failed to prevent Saddam from effectively controlling or supplying his forces in Kuwait.¹⁵ “Strategic paralysis” was not achieved. However, this does not absolutely invalidate Warden’s theory; strategic paralysis may be possible under different circumstances in a future conflict. The larger point is that while technology had given airpower the ability to locate and strike strategic targets with an unprecedented degree of precision, it also increased its potential to destroy an enemy army in the field. In fact, many post-war analysts conclude that in addition to gaining air superiority, attriting Saddam’s army was airpower’s most significant contribution to the joint campaign. Air attacks forced the near-total collapse of many Iraqi units and were a key reason for the extremely low Coalition casualty rate during the ground war.¹⁶ Saddam’s strategy to hold Kuwait, or at least withdraw with conditions, was based on his ability to inflict massive casualties should the Coalition mount a ground offensive. Attriting his army, especially the Republican Guard divisions, directly threatened his strategy. This linkage is reinforced by Saddam’s increasingly desperate attempts to negotiate a withdrawal

¹⁴ Reynolds, 72

¹⁵ Gulf War Air Power Survey vol II directed by Eliot A. Cohen (Washington, D.C.: U.S. Government printing office 1993) 288. GWAPS reported “some disruption and dislocation” had been imposed on the Iraqi leadership a far cry from pre-war expectations.

¹⁶ GWAPS, 370-376. Air attacks led to widespread troop demoralization and massive desertions, especially among the most heavily attrited front-line divisions.

from Kuwait as he observed the devastation wrought by air attacks on his forces.¹⁷ Air attacks on Saddam's ground forces did not delay victory, but were a key to one of the most lopsided victories in history.

National will

In World War II, national will proved more resilient to air attacks than anticipated by Air Corps strategic bombing advocates. This resilience, combined with less-than-expected bombing accuracy and poor intelligence, were the major reasons bombing targets eventually grew to include German and Japanese cities. Setting aside the question of morality, this would seem a logical step in a total war intended to achieve an unconditional surrender. In a limited war, attacking the population directly is probably impossible for political and moral reasons. The means remaining for airmen to indirectly affect national will may be insufficient to force a change in government policy. Desert Storm supports this thesis; Saddam Hussein was not overthrown, nor is there evidence that suggests air attacks seriously weakened support for his policies.

While Desert Storm does not invalidate the theory that airpower can significantly affect popular will in a limited war, it does reinforce the idea that attacks on other target sets may prove a better means of influencing the enemy's decision calculus. In addition to being the backstop for Saddam's strategy of attrition, the Republican Guard was also the ultimate guarantor of his control over Iraq. With their help, he was able to quell Kurdish and Shiite rebellions immediately after the war. Without their help, it is doubtful he would have survived. Therefore, air attacks on his fielded forces threatened his continued leadership, as well as his strategy. The Iraqi Army, especially the Republican Guard, constituted a critical *strategic center of gravity* that should have been included in the strategic air campaign plan.¹⁸

Barriers to change

Analysis of the assumptions underlying the Desert Storm strategic air campaign indicate a broader, more flexible air doctrine may provide better guidance for future planning efforts. Building such a doctrine

¹⁷ On the eve of the ground offensive, Saddam had dropped all conditions for leaving Kuwait except one -- that he be given sufficient time to withdraw his forces without threat of attack.

¹⁸ In-theater air planners included attacks against the Republican Guard in the final air campaign plan, but they were never designated a *strategic* target that constituted part of Saddam's "political center of gravity" nor were they targeted in the initial plan briefed to General Norman H. Schwarzkopf. GWAPS 266-269

will require Air Force airmen to overcome significant barriers to change, including the resistance stemming from the need to maintain centralized control of theater air forces, and residual institutional insecurities.

Need to maintain centralized control of theater air forces

Some Air Force airmen believe including attacks on an enemy army in a strategic air campaign may open the door to a greater role for ground commanders in the planning and execution of air operations. This stimulates concerns that JFACC's could lose the ability to exploit airpower's characteristics fully or mass sufficient force at the decisive points. At an extreme, this could result in a situation where air units are parceled out to Corps commanders to employ according to their own operational concepts. While centralized control of theater air forces brings coherency to the planning process and preserves unity of command, it is an insufficient rationale for rejecting a broader, more flexible air warfare doctrine.

Institutional insecurity

Institutional insecurity also motivates some airmen to resist a more inclusive doctrine. Douhet won his battle for an independent Italian Air Force shortly after World War I; British airmen won their fight during the war itself. The U.S. Air Force was established thirty years later, and memories of the bitter struggle for independence from the Army have not completely faded. During the interwar period, Air Corps airmen saw strategic attack as an independent mission upon which they could stake their claim to a separate service. In fact, current Air Force doctrine still includes an alternate definition of strategic air attack as "an independent air campaign, intended to be decisive, and directed against the essential war-making capacity of the enemy."¹⁹ The strategic bombing campaigns in the Pacific and Europe during World War II provided the final impetus for independence. Therefore, the issue of an independent American air service is inextricably linked to strategic air warfare. Questioning the traditional tenets of strategic air warfare is, to some extent, perceived as challenging the existence of the Air Force.²⁰

¹⁹ Air Force Manual 1-1, 302

²⁰ This fear is exacerbated by the occasional publication that does just that, such as Jeffrey Record's 1990 article titled "Into the Wild Blue Yonder: Should We Abolish the Air Force?" Policy Review (Spring, 1990). Record's basic thesis is that since strategic bombing has never lived up to its promise, there may no longer be a need for an independent Air Force. His article stimulated a flurry of point papers and editorials from a variety of Air Force sources.

Conclusion

In Command of the Air, Douhet correctly predicted the next conflict would be a total war. He believed airpower could destroy a nation's will and capacity to prosecute war by directly attacking its soft inner core without the need to defeat its army in the field. American airmen built on Douhet's theories to develop the doctrinal underpinnings of the World War II strategic bombing campaigns against Germany and Japan. Forty-six years later, American airmen returned to the promise of strategic air warfare as they planned the Desert Storm air campaign. Desert Storm was a limited war fought with limited means, and air attacks did not produce the strategic paralysis airmen sought. Instead, airpower made a decisive contribution to the joint campaign by establishing near-undisputed control of the air, producing operational paralysis, and severely weakening the Iraqi Army.

If there is a lesson to be gained from the Desert Storm air campaign, it is that airmen should carefully examine the linkages between all target sets and the intended effect on an enemy. Doctrine that predestines a particular center of gravity to a lower priority may artificially limit the potential of a modern air force and will be a poor guide for planning future operations. A more flexible theater air warfare doctrine should build on the lessons of America's first post-Cold War conflict. Today, airpower is capable of a "Douhetian" strategy, but his singular focus on attacking a nation's materiel and moral strength at the strategic level may not be appropriate for limited wars. A broader air warfare strategy should determine the value of attacks on all potential centers of gravity. Instead of concentrating resources against traditional "strategic" targets to the detriment of attacking an army in the field, planners should evaluate the potential of all target sets on the enemy's strategy and decision calculus. In fact, the term "strategic air warfare" itself may be outdated. Just as the Air Force no longer distinguishes between "strategic" and "tactical" aircraft, it may be better to have *a single, unified doctrine for theater air warfare* to signify the shift towards a more coherent doctrine. However, change and innovation will require airmen to challenge their long-held beliefs. This can be a painful experience, especially when beliefs approach dogma, and change is perceived as a threat to an organization.